

```

-- File: rti.1.adb
--

with System;
with RTI_Base_Types;
with Unchecked_Conversion;

-- with RTI_Basic_Lists;
package RTI is

-- system parameters
--
-- These are from the C++. Probably all are not needed, but they are
-- all reproduced here. Easier to delete than to add.
--
    Max_Federation : constant Positive := 20;
    Max_Federate : constant Positive := 20;
    Max_Object_Classes : constant Positive := 100;
    Max_Interaction_Classes : constant Positive := 100;
    Max_Attributes_Per_Class : constant Positive := 50;
    Max_Parameters_Per_Class : constant Positive := 50;
    Max_Bytes_Per_Value : constant Positive := 256;
    Max_Federation_Name_Length : constant Positive := 64;
    Max_Federate_Name_Length : constant Positive := 64;
    Privilege_To_Delete_Name : constant String := "privilegeToDelete";
    Privilege_To_Delete_Handle : constant := 0;
    Root_Object_Class_Handle : constant := 0;
    Root_Interaction_Class_Handle : constant := 0;

-- types used across the RTI
--
    type Simple_Handle is new RTI_Base_Types.RTI_UShort;

    type Value_Ptr is access System.Address;
    type Value_Bucket is record
        The_Length: positive;
        The_Value: Value_Ptr;
    end record;

    type Federation_Execution_Name is new RTI_Base_Types.RTI_String;
    type Federation_Handle is new Simple_Handle;

    type Federation_Time is new RTI_Base_Types.RTI_Duration;
    type Tick_Time is new RTI_Base_Types.RTI_Duration;

    type Federate_Name is new RTI_Base_Types.RTI_String;
    type Federate_Handle is new Simple_Handle;

    type Object_Id is new RTI_Base_Types.RTI_ULong;

    type Object_Class_Name is new RTI_Base_Types.RTI_String;
    type Object_Class_Handle is new Simple_Handle;

    type Interaction_Class_Name is new RTI_Base_Types.RTI_String;
    type Interaction_Class_Handle is new Simple_Handle;

    type Attribute_Name is new RTI_Base_Types.RTI_String;
    type Attribute_Handle is new Simple_Handle;

```

```

--  

-- List Types And Declarations  

--  

type Node_Item;  

type Node_Ptr is access all Node_Item'Class;  

type Node_Item is tagged  

  record  

    Next : Node_Ptr := null;  

  end Record;  

  

type Attribute_Handle_Set_Element is new Node_Item  

with record  

  The_Attribute_Handle : Attribute_Handle;  

end record;  

type Attribute_Handle_Set is new Node_Ptr;  

  

type Attribute_Handle_Value_Pair_Set_Element is  

  new Node_Item  

with record  

  The_Attribute_Handle: Attribute_Handle;  

  The_Attribute_Value: Value_Bucket;  

end record;  

type Attribute_Handle_Value_Pair_Set is new Node_Ptr;  

  

type Parameter_Handle_Value_Pair_Set_Element is  

  new Node_Item  

with record  

  The_Parameter_Handle: Attribute_Handle;  

  The_Parameter_Value: Value_Bucket;  

end record;  

type Parameter_Handle_Value_Pair_Set is new Node_Ptr;  

  

--  

-- End List Types  

--  

  

type Parameter_Name is new RTI_Base_Types.RTI_String;  

type Parameter_Handle is new Simple_Handle;  

  

type Pause_Label is new RTI_Base_Types.RTI_String;  

  

type Save_Label is new RTI_Base_Types.RTI_String;  

  

type Event_Retraction_Handle is private;  

  

-- type User_Supplied_Tag is new Value_Bucket; -- WHY?????  

type User_Supplied_Tag is new RTI_Base_Types.RTI_String;  

  

type RTI_Boolean is (RTI_False, RTI_True);  

for RTI_Boolean use  

  (RTI_False => 0,  

   RTI_True => 1);  

  

procedure Set_Retraction_Handle -- New  

  (Handle : in out Event_Retraction_Handle;  

   Value : in Simple_Handle);  

  

function Convert_To_Integer is new Unchecked_Conversion  

  (Source => RTI_Boolean,  

   Target => Integer);

```

```
function Convert_To_Rti_Boolean is new Unchecked_Conversion
  (Source => Integer,
   Target => RTI_Boolean);

private

  type Event_Retraction_Handle is new Simple_Handle;

end RTI;
```

```
--  
-- File: rti_base_types.1.adb  
--  
  
with Interfaces.C;  
  
package RTI_Base_Types is  
    package C renames Interfaces.C;  
  
    --  
    -- base types  
    --  
    subtype RTI_String is String;  
  
        -- RTI_Float isn't used, is it needed?  
    subtype RTI_Float is Float;  
  
    subtype RTI_Duration is Duration;  
  
    subtype RTI_ULong is integer range 0 .. Integer'Last;  
    subtype RTI_Long is integer;  
  
    subtype RTI_Ushort is C.Unsigned_Short;  
    subtype RTI_Short is C.Short;  
    subtype RTI_Double is C.Double;  
    subtype RTI_Float is C.C_Float;  
    subtype RTI_Id is C.Unsigned_Long;  
    -- subtype RTI_Boolean is C.Unsigned_Char; -- Huh????  
  
end RTI_Base_Types;
```

```

-- File: rti_basic_lists.1.ad
--



-----| NAME rti_basic_lists.1.ad
-----| PURPOSE
-----|
-----| ENVIRONMENT_DEPENDENCIES None
-----| MACHINE_DEPENDENCIES designed for use on IBM PowerPC running AIX
-----| DEVICE_IO_DEPENDENCIES None
-----| EXECUTION_CONSTRAINTS None
-----| DESIGN_CONSTRAINTS designed to function with version F0 of the RTI
-----|



-----| with RTI;
-----| package RTI_Basic_Lists is

-----|     type Node_Item is tagged limited private;
-----|     type Node_Ptr is access all Node_Item'Class;

-----|     -- abstraction assumes head of a list is a Node_Ptr

-----|     function Size_Of (The_List : in RTI.Node_Ptr) return Natural;

-----|     procedure Empty (The_List : in out RTI.Node_Ptr);

-----|     procedure Add (The_List : in out RTI.Node_Ptr;
-----|                     The_Item : in RTI.Node_Item'Class);

-----|     procedure Remove (The_List : in out RTI.Node_Ptr;
-----|                        The_Item : in RTI.Node_Item'Class);

-----|     function Is_Empty (The_List : in RTI.Node_Ptr) return Boolean;

-----|     function Get (The_List : in RTI.Node_Ptr;
-----|                    Ith_Item: Positive) return RTI.Node_Item'Class;

-----| generic
-----|     with function Equal (Item_A: in RTI.Node_Item'Class;
-----|                           Item_B: in RTI.Node_Item'Class) return Boolean;
-----|     function Is_Member (The_List : in RTI.Node_Item'Class;
-----|                          The_Item : in RTI.Node_Item'Class) return Boolean;

-----| end RTI_Basic_Lists;

```

```
--  
-- File: rti_ambassador_class.1.adb  
--  
  
with Federate_Ambassador_Class;  
  
--  
-- RTI_Ambassador_Class represents the class of objects (and services  
-- associated with them) which provide the interface to the RTI. A new RTI  
-- Ambassador Object becomes associated with each new "join" by a simulation  
-- to the Federation Execution  
--  
  
package RTI_Ambassador_Class is  
  
    -- The type from which RTI Ambassadors will be instantiated  
    -- This tagged type contains a reference to the associated Federate  
    -- Ambassador object. This is needed due to the way Ada95 associates  
    -- routines with objects. This differs from the C++ paradigm in which  
    -- routines are tightly bound to the object definition  
  
    type RTI_Ambassador is tagged  
        record  
            This_Federate_Ambassador :  
                Federate_Ambassador_Class.Federate_Ambassador_Ptr;  
        end record;  
  
    type RTI_Ambassador_Ptr is access RTI_Ambassador;  
  
end RTI_Ambassador_Class;
```

```

-- File: federate_ambassador_class.1.adb
--

-- NAME federate_ambassador_class.1.adb
-- PURPOSE
--   Provide an abstract class definition for the Federate_Ambassador Object.
--   Federates need to "inherit" from the template and define the member
--   functions listed here. Instantiations of this class will be called
--   by the RTI
--
-- ENVIRONMENT_DEPENDENCIES None
-- MACHINE_DEPENDENCIES designed for use on IBM PowerPC running AIX
-- DEVICE_IO_DEPENDENCIES None
-- EXECUTION_CONSTRAINTS None
-- DESIGN_CONSTRAINTS designed to function with version F0 of the RTI
--


-- Federate_Ambassador_Class provides a "template" for federate supplied
-- routines. Each of the federate supplied routines are initiated by the
-- RTI via callbacks
--

with RTI;
with DDM;

package Federate_Ambassador_Class is

  -- Federate_Ambassador is an abstract tagged type because it is up to the
  -- the individual Federates to instantiate this object along with its
  -- corresponding routines.
  type Federate_Ambassador is abstract tagged
    record
      Identifier : Integer;
    end record;

  --
  -- Federate_Ambassador_Ptr provides access to the class wide set of
  -- Federate Ambassadors. This allows dispatching to the appropriate
  -- routine as additional Federate Ambassadors are created.
  type Federate_Ambassador_Ptr is access Federate_Ambassador'Class;

--


-- Provides the Federation Management services (2.x services) initiated
-- by the RTI.
--


-- 2.6
procedure Initiate_Pause
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Label : in RTI.Pause_Label) is abstract;
  -- should raise only the following exceptions:
  --   Federate_Already_Paused
  --   Federate_Internal_Error

-- 2.9
procedure Initiate_Resume
  (The_Federate_Ambassador : in Federate_Ambassador) is abstract;
  -- should raise only the following exceptions:

```

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--      Federate_Not_Paused
--      Federate_Internal_Error

-- 2.12
procedure Initiate_Federate_Save
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Label : in RTI.Save_Label) is abstract;
-- should raise only the following exceptions:
--      Unable_To_Perform_Save
--      Federate_Internal_Error

procedure Initiate_Federate_Save
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Label : in RTI.Save_Label;
   The_Time : in RTI.Federation_Time) is abstract;
-- should raise only the following exceptions:
--      Invalid_Federation_Time
--      Unable_To_Perform_Save
--      Federate_Internal_Error

-- 2.16
procedure Initiate_Restore
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Label : in RTI.Save_Label) is abstract;
-- should raise only the following exceptions:
--      Specified_Save_Label_Does_Not_Exist
--      Could_Not_Restore
--      Federate_Internal_Error

--

-- Provides the Declaration Management services (3.x services) initiated
-- by the RTI.
--

-- 3.5
procedure Start_Updates
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Class : in RTI.Object_Class_Handle;
   The_Attributes : access RTI.Attribute_Handle_Set) is abstract;
-- should raise only the following exceptions:
--      Object_Class_Not_Published
--      Attribute_Not_Published
--      Federate_Internal_Error

procedure Stop_Updates
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Class : in RTI.Object_Class_Handle;
   The_Attributes : access RTI.Attribute_Handle_Set) is abstract;
-- should raise only the following exceptions:
--      Object_Class_Not_Published
--      Attribute_Not_Published
--      Federate_Internal_Error

-- 3.6
procedure Start_Interaction_Generation
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Handle : RTI.Interaction_Class_Handle) is abstract;
-- should raise only the following exceptions:
--      Interaction_Class_Not_Published
--      Federate_Internal_Error

procedure Stop_Interaction_Generation

```

```

(The_Federate_Ambassador : in Federate_Ambassador;
The_Handle : in RTI.Interaction_Class_Handle) is abstract;
-- should raise only the following exceptions:
--   Interaction_Class_Not_Published
--   Federate_Internal_Error

--
--
-- Provides the Object Management services (4.x services) initiated
-- by the RTI.
--

-- types unique to Internal Object Management services

type Object_Removal_Reason is (Out_Of_Region,
                                 Object_Deleted,
                                 No_Longer_Subscribed);

for Object_Removal_Reason use
  (Out_Of_Region => 0,
   Object_Deleted => 1,
   No_Longer_Subscribed => 2);

-- 4.4
procedure Discover_Object
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   The_Object_Class : in RTI.Object_Class_Handle;
   The_Time : in RTI.Federation_Time;
   The_Tag : in RTI.User_Supplied_Tag;
   The_Event : in RTI.Event_Retraction_Handle) is abstract;
-- should raise only the following exceptions:
--   Could_Not_Discover_Object
--   Object_Class_Not_Known
--   Invalid_Federation_Time
--   Federate_Internal_Error

-- 4.5
procedure Reflect_Attribute_Values
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   The_Attributes : access RTI.Attribute_Handle_Value_Pair_Set;
   The_Time : in RTI.Federation_Time;
   The_Tag : in RTI.User_Supplied_Tag;
   The_Event : in RTI.Event_Retraction_Handle) is abstract;
-- should raise only the following exceptions:
--   Object_Not_Known
--   Attribute_Not_Known
--   Invalid_Federation_Time
--   Federate_Internal_Error

-- 4.7
procedure Receive_Interaction
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Interaction_Class : in RTI.Interaction_Class_Handle;
   The_Parameters : access RTI.Parameter_Handle_Value_Pair_Set;
   The_Time : in RTI.Federation_Time;
   The_Tag : in RTI.User_Supplied_Tag;
   The_Event : in RTI.Event_Retraction_Handle) is abstract;
-- should raise only the following exceptions:
--   Interaction_Class_Not_Known
--   Interaction_Parameter_Not_Known

```

```

--      Invalid_Federation_Time
--      Federate_Internal_Error

-- 4.9
procedure Remove_Object
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   The_Reason : in Object_Removal_Reason;
   The_Time : in RTI.Federation_Time;
   The_Tag : in RTI.User_Supplied_Tag;
   The_Event : in RTI.Event_Retraction_Handle) is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Invalid_Federation_Time
--      Federate_Internal_Error

procedure Remove_Object
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   The_Reason : in Object_Removal_Reason;
   The_Time : in RTI.Federation_Time;
   The_Tag : in RTI.User_Supplied_Tag) is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Invalid_Federation_Time
--      Federate_Internal_Error

-- 4.15
procedure Provide_Attribute_Value_Update
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   The_Attributes : access RTI.Attribute_Handle_Set) is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Attribute_Not_Known
--      Federate_Internal_Error

-- 4.17
procedure Reflect_Retraction
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Event : in RTI.Event_Retraction_Handle) is abstract;
-- should raise only the following exceptions:
--      Event_Not_Known
--      Federate_Internal_Error

--
--
-- Provides the Ownership Management services (5.x services) initiated
-- by the RTI.
--

-- 5.2
function Request_Attribute_Ownership_Assumption
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Object : in RTI.Object_Id;
   Offered_Attributes : access RTI.Attribute_Handle_Set;
   The_Tag : in RTI.User_Supplied_Tag)
return RTI.Attribute_Handle_Set is abstract;
-- should raise only the following exceptions:

```

```

--      Object_Not_Known
--      Attribute_Not_Known
--      Attribute_Already_Owned
--      Federate_Internal_Error

function Request_Attribute_Ownership_Assumption
    (The_Federate_Ambassador : in Federate_Ambassador;
     The_Object : in RTI.Object_Id;
     Offered_Attributes : access RTI.Attribute_Handle_Set)
return RTI.Attribute_Handle_Set is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Attribute_Not_Known
--      Federate_Internal_Error

-- 5.3
procedure Attribute_Ownership_Divestiture_Notification
    (The_Federate_Ambassador : in Federate_Ambassador;
     The_Object : in RTI.Object_Id;
     Released_Attributes : access RTI.Attribute_Handle_Set) is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Attribute_Not_Known
--      Federate_Internal_Error

-- 5.4
procedure Attribute_Ownership_Acquisition_Notification
    (The_Federate_Ambassador : in Federate_Ambassador;
     The_Object : in RTI.Object_Id;
     Acquired_Attributes : access RTI.Attribute_Handle_Set) is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Attribute_Not_Known
--      Federate_Internal_Error

-- 5.6
function Request_Attribute_Ownership_Release
    (The_Federate_Ambassador : in Federate_Ambassador;
     The_Object : in RTI.Object_Id;
     Requested_Attributes : access RTI.Attribute_Handle_Set;
     The_Tag : in RTI.User_Supplied_Tag)
return RTI.Attribute_Handle_Set is abstract;
-- should raise only the following exceptions:
--      Object_Not_Known
--      Attribute_Not_Known
--      Federate_Internal_Error

-- 5.7
procedure Inform_Attribute_Ownership
    (The_Federate_Ambassador : in Federate_Ambassador;
     The_Object: in RTI.Object_Id;
     The_Attribute: in RTI.Attribute_Handle;
     The_Owner: in RTI.Federate_Handle) is abstract;
-- should raise only the following exceptions:
--      Federate_Internal_Error

--
--
-- Provides the Time Management services (6.x services) initiated
-- by the RTI.
--

```

```
-- 6.10
procedure Time_Advance_Grant
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Time : in RTI.Federation_Time) is abstract;
-- should raise only the following exceptions:
--   Invalid_Federation_Time
--   Time_Advance_Was_Not_In_Progress
--   Federation_Time_Already_Passed
--   Federate_Internal_Error

--
--
-- Provides the Data Distribution Management services (7.x services) initiated
-- by the RTI.
--

-- 7.4
procedure Change_Thresholds
  (The_Federate_Ambassador : in Federate_Ambassador;
   The_Region : in DDM.Region;
   The_Thresholds : access DDM.Threshold_Set) is abstract;
-- should raise only the following exceptions:
--   Region_Not_Known
--   Federate_Internal_Error

end Federate_Ambassador_Class;
```

```

-- 
-- File rac_federation_management.1.adb
--

with RTI;
with RTI_Base_Types;

package RTI_Ambassador_Class.Federation_Management is

-- 
-- Provides the Federation Management services (2.x services) initiated
-- by federates.
-- 

-- 
-- types unique to Federation Management services
-- 

type File_Name is new RTI_Base_Types.RTI_String;

type Resign_Action is (Release_Attributes,
                      Delete_Objects,
                      Delete_Objects_And_Release_Attributes);

for Resign_Action use
  (Release_Attributes => 1,
   Delete_Objects => 2,
   Delete_Objects_And_Release_Attributes => 3);

type Save_Indicator is (Save_Achieved,
                        Save_Not_Achieved);

type Restore_Indicator is (Restore_Federate_Achieved,
                           Restore_Federate_Not_Achieved);

-- 
-- 2.x services
-- 

-- 2.1
procedure Create_Federation_Execution
  (The_Name : in RTI.Federation_Execution_Name;
   R_I_D : in File_Name);
-- should raise ONLY the following exceptions:
--   Federation_Execution_Already_Exists
--   Could_Not_Open_RID
--   Error_Reading_RID
--   RTI_Internal_Error

-- 2.2
procedure Destroy_Federation_Execution
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   Execution_Name : in RTI.Federation_Execution_Name);
-- should raise ONLY the following exceptions:
--   Federates_Currently_Joined
--   Federation_Execution_Does_Not_Exist
--   RTI_Internal_Error

-- 2.3
procedure Join_Federation_Execution
  (Your_Name : in RTI.Federate_Name);

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Execution_Name : in RTI.Federation_Execution_Name;
The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--   Federate_Already_Execution_Member
--   Federation_Execution_Does_Not_Exist
--   Could_Not_Open RID
--   Error_Reading RID
--   RTI_Internal_Error

-- 2.4
procedure Resign_Federation_Execution
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Action : in Resign_Action);
-- should raise ONLY the following exceptions:
--   Federate_Owns_Attributes
--   Federate_Not_Execution_Member
--   Federation_Execution_Does_Not_Exist
--   Invalid_Resign_Action
--   RTI_Internal_Error

-- not implemented in F.0
procedure Resign_Federation_Execution
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   A_Federate : in RTI.Federate_Handle;
   The_Action : in Resign_Action);
-- should raise ONLY the following exceptions:
--   Federate_Owns_Attributes
--   Federation_Execution_Does_Not_Exist
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 2.5
-- not implemented in F.0
procedure Request_Pause
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Pause_Label);
-- should raise ONLY the following exceptions:
--   Federation_Already_Paused
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 2.7
-- not implemented in F.0
procedure Pause_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Pause_Label);
-- should raise ONLY the following exceptions:
--   Unknown_Label
--   No_Pause_Requested
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 2.8
-- not implemented in F.0
procedure Request_Resume
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--   Federation_Not_Paused
--   Federate_Not_Execution_Member

```

```

--      RTI_Internal_Error

-- 2.10          -- not implemented in F.0
procedure Resume_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--      No_Resume_Request
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 2.11          -- not implemented in F.0
procedure Request_Federation_Save
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Save_Label);
-- should raise ONLY the following exceptions:
--      Save_In_Progress
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

                      -- not implemented in F.0
procedure Request_Federation_Save
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Save_Label;
   The_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--      Save_In_Progress
--      Federation_Time_Already_Passed
--      Invalid_Federation_Time
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 2.13          -- not implemented in F.0
procedure Federate_Save_Begun
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--      Save_Not_Initiated
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

                      -- not implemented in F.0
procedure Federate_Save_Begun
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--      Save_Not_Initiated
--      Invalid_Federate_Time
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 2.14          -- not implemented in F.0
procedure Federate_Save_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--      Save_Not_Initiated

```

```

-- Federate_Not_Execution_Member
-- RTI_Internal_Error

-- not implemented in F.0
procedure Federate_Save_Not_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr);
-- should raise ONLY the following exceptions:
--   Save_Not_Initiated
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 2.15
-- not implemented in F.0
procedure Request_Restore
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Save_Label);
-- should raise ONLY the following exceptions:
--   Specified_Save_Label_Does_Not_Exist
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 2.17
-- not implemented in F.0
procedure Restore_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Save_Label);
-- should raise ONLY the following exceptions:
--   Unknown_Label
--   Restore_Not_Requested
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- not implemented in F.0
procedure Restore_Not_Achieved
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Label : in RTI.Save_Label);
-- should raise ONLY the following exceptions:
--   Unknown_Label
--   Restore_Not_Requested
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

end RTI_Ambassador_Class.Federation_Management;

```

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-- 
-- File rac_declaration_management.1.ada
--

with RTI;
with DDM;

package RTI_Ambassador_Class.Declaration_Management is

-- 
-- Provides the Declaration Management services (3.x services) initiated
-- by federates.
-- 

-- 3.1
procedure Publish_Object_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle;
     Attribute_List : access RTI.Attribute_Handle_Set);
-- should raise ONLY the following exceptions:
--     Object_Class_Not_Defined
--     Attribute_Not_Defined
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

procedure Unpublish_Object_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle);
-- should raise ONLY the following exceptions:
--     Object_Class_Not_Defined
--     Federate_Owes_Attributes
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

-- 3.2
procedure Publish_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Interaction : in RTI.Interaction_Class_Handle);
-- should raise ONLY the following exceptions:
--     Interaction_Class_Not_Defined
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

procedure Unpublish_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Interaction : in RTI.Interaction_Class_Handle);
-- should raise ONLY the following exceptions:
--     Interaction_Class_Not_Defined
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

-- 3.3
procedure Subscribe_Object_Class_Attribute
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle;
     Attribute_List : access RTI.Attribute_Handle_Set);
-- should raise ONLY the following exceptions:
--     Object_Class_Not_Defined,

```

```

--      Attribute_Not_Defined
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

--          -- not implemented in F.0
procedure Subscribe_Object_Class_Attribute
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle;
     The_Attribute : in RTI.Attribute_Handle;
     The_Region : in DDM.Region);
-- should raise ONLY the following exceptions:
--      Object_Class_Not_Defined
--      Attribute_Not_Defined
--      Region_Not_Known
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

procedure Unsubscribe_Object_Class_Attribute
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle);
-- should raise ONLY the following exceptions:
--      Object_Class_Not_Defined
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

--          -- not implemented in F.0
procedure Unsubscribe_Object_Class_Attribute
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Object_Class_Handle;
     The_Region : in DDM.Region);
-- should raise ONLY the following exceptions:
--      Object_Class_Not_Defined
--      Region_Not_Known
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 3.4
procedure Subscribe_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Interaction_Class_Handle);
-- should raise ONLY the following exceptions:
--      Interaction_Class_Not_Defined
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

--          -- not implemented in F.0
procedure Subscribe_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Interaction_Class_Handle;
     The_Region : in DDM.Region);
-- should raise ONLY the following exceptions:
--      Interaction_Class_Not_Defined
--      Region_Not_Known
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

procedure Unsubscribe_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr);

```

```
        The_Class : in RTI.Interaction_Class_Handle);
-- should raise ONLY the following exceptions:
--   Interaction_Class_Not_Defined
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

          -- not implemented in F.0
procedure Unsubscribe_Interaction_Class
    (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
     The_Class : in RTI.Interaction_Class_Handle;
     The_Region : in DDM.Region);
-- should raise ONLY the following exceptions:
--   Interaction_Class_Not_Defined
--   Region_Not_Known
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

end RTI_Ambassador_Class.Declaration_Management;
```

```

-- 
-- File rac_object_management.1.adb
--

with Rti;
with Rti_Basic_Lists;

package Rti_Ambassador_Class.Object_Management is

-- 
-- provides the object management services (2.x services) initiated
-- by federates.
-- 

-- 
-- types unique to object management services
-- 

subtype Object_Id_Count is Positive;

type Data_Order_Type is (Receive,
                         Timestamp);
for Data_Order_Type use
  (Receive => 1,
   Timestamp => 2);

type Transportation_Type is (Reliable,
                             Best_Effort);
for Transportation_Type use
  (Reliable => 1,
   Best_Effort => 2);

-- 4.1
procedure Request_Id
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   Id_Count : in Object_Id_Count;
   First_Id: Rti.Object_Id;
   Last_Id: Rti.Object_Id);
-- should raise only the following exceptions:
--   too_many_ids_requested
--   id_supply_exhausted
--   federate_not_execution_member
--   rti_internal_error

-- 4.2
procedure Register_Object
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Object_Class : in Rti.Object_Class_Handle;
   The_Object : in Rti.Object_Id);
-- should raise only the following exceptions:
--   invalid_object_id
--   object_id_already_registered
--   object_class_not_defined
--   object_class_not_published
--   federate_not_execution_member
--   rti_internal_error

-- 4.3
function Update_Attribute_Values
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Object : in Rti.Object_Id;
   The_Attributes_And_Values : access Rti.Attribute_Handle_Value_Pair_Set);

```

```

The_Time : in Rti.Federation_Time;
The_Tag : in Rti.User_Supplied_Tag)
return Rti.Event_Retraction_Handle;
-- should raise only the following exceptions:
--   object_not_know
--   attribute_not_defined
--   attribute_not_owned
--   invalid_federation_time
--   federate_not_execution_member
--   rti_internal_error

-- 4.6
function Send_Interaction
(The_Rti_Ambassador : in Rti_Ambassador_Ptr;
The_Interaction : in Rti.Interaction_Class_Handle;
The_Parameters_And_Values : access Rti.Parameter_Handle_Value_Pair_Set;
The_Time : in Rti.Federation_Time;
The_Tag : in Rti.User_Supplied_Tag)
return Rti.Event_Retraction_Handle;
-- should raise only the following exceptions:
--   interaction_class_not_defined
--   interaction_class_not_published
--   interaction_parameter_not_defined
--   invalid_federation_time
--   federate_not_execution_member
--   rti_internal_error

-- 4.8
function Delete_Object
(The_Rti_Ambassador : in Rti_Ambassador_Ptr;
The_Object : in Rti.Object_Id;
The_Time : in Rti.Federation_Time;
The_Tag : in Rti.User_Supplied_Tag)
return Rti.Event_Retraction_Handle;
-- should raise only the following exceptions:
--   object_not_known
--   delete_privilege_not_held
--   invalid_federation_time
--   federate_not_execution_member
--   rti_internal_error

-- 4.10
procedure Change_Attribute_Transportation_Type
(The_Rti_Ambassador : in Rti_Ambassador_Ptr;
The_Object : in Rti.Object_Id;
The_Attributes : access Rti.Attribute_Handle_Set;
The_Type : in Transportation_Type);
-- should raise only the following exceptions:
--   object_not_known
--   attribute_not_defined
--   attribute_not_owned
--   invalid_transportation_type
--   federate_not_execution_member
--   rti_internal_error

-- 4.11
procedure Change_Attribute_Order_Type
(The_Rti_Ambassador : in Rti_Ambassador_Ptr;
The_Object : in Rti.Object_Id;
The_Attributes : access Rti.Attribute_Handle_Set;
The_Data_Order : in Data_Order_Type);

```

```

-- should raise only the following exceptions:
--   object_not_known
--   attribute_not_defined
--   attribute_not_owned
--   invalid_order_type
--   federate_not_execution_member
--   rti_internal_error

-- 4.12
procedure Change_Interaction_Transportation_Type
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Interaction_Class : in Rti.Interaction_Class_Handle;
   The_Type : in Transportation_Type);
-- should raise only the following exceptions:
--   interaction_class_not_defined
--   federate_not_publishing_interaction_class
--   invalid_transportation_type
--   federate_not_execution_member
--   rti_internal_error

-- 4.13
procedure Change_Interaction_Order_Type
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Interaction_Class : in Rti.Interaction_Class_Handle;
   The_Data_Order : in Data_Order_Type);
-- should raise only the following exceptions:
--   interaction_class_not_defined
--   federate_not_publishing_interaction_class
--   invalid_order_type
--   federate_not_execution_member
--   rti_internal_error

-- 4.14
procedure Request_Object_Attribute_Value_Update
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Object : in Rti.Object_Id;
   The_Attributes : access Rti.Attribute_Handle_Set);
-- should raise only the following exceptions:
--   object_not_known
--   attribute_not_defined
--   federate_not_execution_member
--   rti_internal_error

procedure Request_Object_Attribute_Value_Update
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Object : in Rti.Object_Id);
-- should raise only the following exceptions:
--   object_not_known
--   federate_not_execution_member
--   rti_internal_error

procedure Request_Class_Attribute_Value_Update
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Class : in Rti.Object_Class_Handle;
   The_Attributes : access Rti.Attribute_Handle_Set);
-- should raise only the following exceptions:
--   object_class_not_defined
--   attribute_not_defined
--   federate_not_execution_member
--   rti_internal_error

procedure Request_Class_Attribute_Value_Update
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;

```

```
The_Class : in Rti.Object_Class_Handle);
-- should raise only the following exceptions:
--   object_class_not_defined
--   federate_not_execution_member
--   rti_internal_error

-- 4.16
procedure Retract
  (The_Rti_Ambassador : in Rti_Ambassador_Ptr;
   The_Event : in Rti.Event_Retraction_Handle);
-- should raise only the following exceptions:
--   invalid_retraction_handle
--   federate_not_execution_member
--   rti_internal_error

end Rti_Ambassador_Class.Object_Management;
```

```

-- 
-- File rac_ownership_management.1.ada
--

with RTI_Base_Types;
-- with RTI_Basic_Lists;
with RTI;

package RTI_Ambassador_Class.Ownership_Management is

-- 
-- Provides the Ownership Management services (5.x services) initiated
-- by federates.
-- 

-- 
-- types unique to Ownership Management services
-- 

type Ownership_Divestiture_Condition is (Negotiated,
                                           Unconditional);

for Ownership_Divestiture_Condition use
  (Negotiated => 1,
   Unconditional => 2);

type Federate_Set_Element is new RTI.Node_Item with record
  The_Federate: RTI.Federate_Handle;
end record;
type Federate_Handle_Set is new RTI.Node_Ptr;

-- 5.1
procedure Request_Attribute_Ownership_Divestiture
  (The_RTI_Ambassador :in RTI_Ambassador_Ptr;
   The_Object : in RTI.Object_Id;
   The_Attributes : access RTI.Attribute_Handle_Set;
   The_Condition : in Ownership_Divestiture_Condition;
   The_Tag : in RTI.User_Supplied_Tag);
-- should raise ONLY the following exceptions:
--   Object_Not_Known
--   Attribute_Not_Defined
--   Attribute_Not_Owned
--   Invalid_Divestiture_Condition
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

procedure Request_Attribute_Ownership_Divestiture
  (The_RTI_Ambassador :in RTI_Ambassador_Ptr;
   The_Object : in RTI.Object_Id;
   The_Attributes : access RTI.Attribute_Handle_Set;
   The_Condition : in Ownership_Divestiture_Condition;
   The_Tag : in RTI.User_Supplied_Tag;
   The_Candidates : access Federate_Handle_Set);
-- should raise ONLY the following exceptions:
--   Object_Not_Known
--   Attribute_Not_Defined
--   Attribute_Not_Owned
--   Invalid_Divestiture_Condition
--   Federate_Does_Not_Exist
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

```

```

-- 5.5
procedure Request_Attribute_Ownership_Acquisition
  (The_RTI_Ambassador :in RTI_Ambassador_Ptr;
   The_Object : in RTI.Object_Id;
   Desired_Attributes : access RTI.Attribute_Handle_Set;
   The_Tag : in RTI.User_Supplied_Tag);
-- should raise ONLY the following exceptions:
--   Object_Not_Known
--   Object_Class_Not_Published
--   Object_Class_Not_Subscribed
--   Attribute_Not_Defined
--   Attribute_Not_Published
--   Attribute_Not_Subscribed
--   Federate_Owes_Attributes
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 5.7
procedure Query_Attribute_Ownership
  (The_RTI_Ambassador :in RTI_Ambassador_Ptr;
   The_Object : in RTI.Object_Id;
   The_Attribute : in RTI.Attribute_Handle);
-- should raise ONLY the following exceptions:
--   Object_Not_Known
--   Attribute_Not_Defined
--   Attribute_Not_Known
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

function Attribute_Is_Owned_By_Federate
  (The_RTI_Ambassador :in RTI_Ambassador_Ptr;
   The_Object : in RTI.Object_Id;
   The_Attribute : in RTI.Attribute_Handle)
return RTI.RTI_Boolean;
-- should raise ONLY the following exceptions:
--   Object_Not_Known
--   Attribute_Not_Defined
--   Attribute_Not_Known
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

end RTI_Ambassador_Class.Ownership_Management;

```

```

-- 
-- File rac_time_management.1.ada
--

with RTI;

package RTI_Ambassador_Class.Time_Management is

-- 
-- Provides the Time Management services (6.x services) initiated
-- by federates.
-- 

-- 
-- types unique to Time Management services
-- 

subtype Federation_Time_Delta is RTI.Federation_Time;

-- 6.1
function Request_Federation_Time
    (The_RTI_Ambassador : in RTI_Ambassador_Ptr)
return RTI.Federation_Time;
-- should raise ONLY the following exceptions:
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

-- 6.2
function Request_Lower_Bound_Timestamp
    (The_RTI_Ambassador : in RTI_Ambassador_Ptr)
return RTI.Federation_Time;
-- should raise ONLY the following exceptions:
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

-- 6.3
function Request_Federate_Time
    (The_RTI_Ambassador : in RTI_Ambassador_Ptr)
return RTI.Federation_Time;
-- should raise ONLY the following exceptions:
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

-- 6.4
function Request_Minimum_Next_Event_Time
    (The_RTI_Ambassador : in RTI_Ambassador_Ptr)
return RTI.Federation_Time;
-- should raise ONLY the following exceptions:
--     Federate_Not_Execution_Member
--     RTI_Internal_Error;

-- 6.5
procedure Set_Lookahead
    (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
     The_Lookahead : in Federation_Time_Delta);
-- should raise ONLY the following exceptions:
--     Invalid_Federation_Time_Delta
--     Federate_Not_Execution_Member
--     RTI_Internal_Error

```

```

-- 6.6
function Request_Lookahead
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr)
return Federation_Time_Delta;
-- should raise ONLY the following exceptions:
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 6.7
procedure Time_Advance_Request
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--   Time_Advance_Already_In_Progress
--   Federation_Time_Already_Passed
--   Invalid_Federation_Time
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 6.8
procedure Next_Event_Request
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--   Time_Advance_Already_In_Progress
--   Federation_Time_Already_Passed
--   Invalid_Federation_Time
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- not implemented in F.0
procedure Next_Event_Request
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Time : in RTI.Federation_Time;
   Delta_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--   Time_Advance_Already_In_Progress
--   Federation_Time_Already_Passed
--   Invalid_Federation_Time
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 6.9
procedure Flush_Queue_Request
  (The_RTI_Ambassador : in RTI_Ambassador_Ptr;
   The_Time : in RTI.Federation_Time);
-- should raise ONLY the following exceptions:
--   Time_Advance_Already_In_Progress
--   Federation_Time_Already_Passed
--   Invalid_Federation_Time
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

end RTI_Ambassador_Class.Time_Management;

```

```

-- 
-- File: ddm.1.adb
--

with RTI_Base_Types;
-- with RTI_Basic_Lists;
with RTI;

package DDM is

    type Space_Name is new RTI_BASE_TYPES.RTI_String;
    type Space_Handle is private;

    type Region is private;

    type RTI_Range is record
        first, last: RTI_Base_Types.RTI_ULong;
    end record;

    type Extents_Element is new RTI.Node_Item with record
        The_Range: RTI_Range;
    end record;
    type Extents is new RTI.Node_Ptr;

    type Extent_Set_Element is new RTI.Node_Item with record
        The_Extent: Extents;
    end record;
    type Extent_Set is new RTI.Node_Ptr;

    type Threshold is new RTI_Base_Types.RTI_ULong;

    type Threshold_Set_Element is new RTI.Node_Item with record
        The_Threshold: Threshold;
    end record;
    type Threshold_Set is new RTI.Node_Ptr;

    type Association_Action is (Form_Association,
                                Break_Association);

    procedure Set_Region
        (My_Region : in out Region;
         With_Value : in RTI_Base_Types.RTI_ULong);

private

    type Region is new RTI_Base_Types.RTI_ULong;

    type Space_Handle is new RTI.Simple_Handle;

end DDM;

```

```

-- 
-- File rac_data_distribution_management.1.ada
--

with RTI_BASE_TYPES;
with RTI;
with DDM;

package RTI_Ambassador_Class.Data_Distribution_Management is

-- 
-- Provides the Data Distribution Management services
-- (7.x services) initiated by federates.
-- 

-- 7.1
procedure Create_Update_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Routing_Space : in DDM.Space_Handle;
   The_Extents : access DDM.Extent_Set;
   The_Region : out DDM.Region);

-- should raise ONLY the following exceptions:
--   Space_Not_Defined
--   Invalid_Extents
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 7.2
procedure Create_Subscription_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Routing_Space : in DDM.Space_Name;
   The_Extents : access DDM.Extent_Set;
   The_Region : out DDM.Region);
-- should raise ONLY the following exceptions:
--   Space_Not_Defined
--   Invalid_Extents
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

-- 7.3
procedure Associate_Update_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Region : in DDM.Region;
   The_Object : in RTI.Object_Id;
   The_Attributes : access RTI.Attribute_Handle_Set;
   The_Action : in DDM.Association_Action);
-- should raise ONLY the following exceptions:
--   Region_Not_Known
--   Object_Not_Known
--   Attribute_Not_Defined
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

procedure Associate_Update_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Region : in DDM.Region;
   The_Interaction_Class : in RTI.Interaction_Class_Handle;
   The_Action : in DDM.Association_Action);
-- should raise ONLY the following exceptions:
--   Region_Not_Known

```

```

--      Interaction_Class_Not_Known
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 7.5
procedure Modify_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Region : in DDM.Region;
   The_Extents : access DDM.Extent_Set);
-- should raise ONLY the following exceptions:
--      Region_Not_Known
--      Invalid_Extents
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 7.6
procedure Delete_Region
  (The_RTI_Ambassador: in RTI_Ambassador_Ptr;
   The_Region : in DDM.Region);
-- should raise ONLY the following exceptions:
--      Region_Not_Known
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 
-- 8.9
function Get_Space_Handle
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
   The_Name:
     in DDM.Space_Name)
return DDM.Space_Handle;
-- should raise only the following exceptions:
--      Name_Not_Found
--      Federate_Not_Execution_Member
--      Concurrent_Access_Attempted
--      RTI_Internal_Error
--      Unimplemented_Service

-- 8.10
function Get_Space_Name
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
   The_Handle: DDM.Space_Handle)
return DDM.Space_Name;
-- should raise only the following exceptions:
--      Space_Not_Defined
--      Federate_Not_Execution_Member
--      Concurrent_Access_Attempted
--      RTI_Internal_Error
--      Unimplemented_Service

end RTI_Ambassador_Class.Data_Distribution_Management;

```

```

-- 
-- File: rti_support.1.adb
--

with RTI;
with RTI_Base_Types;
with RTI_Ambassador_Class.Data_Distribution_Management;

package RTI_Support is

-- 8.1
    function Get_Object_Class_Handle
        (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
         The_Name: in RTI.Object_Class_Name)
        return RTI.Object_Class_Handle;
    -- should raise only the following exceptions:
    --     Name_Not_Found
    --     Federate_Not_Execution_Member
    --     Concurrent_Access_Attempted
    --     RTI_Internal_Error

-- 8.2
    function Get_Object_Class_Name
        (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
         The_Handle: in RTI.Object_Class_Handle)
        return RTI.Object_Class_Name;
    -- should raise only the following exceptions:
    --     Object_Class_Not_Defined
    --     Federate_Not_Execution_Member
    --     Concurrent_Access_Attempted
    --     RTI_Internal_Error

-- 8.3
    function Get_Attribute_Handle
        (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
         The_Name: in RTI.Attribute_Name;
         Which_Class: in RTI.Object_Class_Handle)
        return RTI.Attribute_Handle;
    -- should raise only the following exceptions:
    --     Object_Class_Not_Defined
    --     Name_Not_Found
    --     Federate_Not_ExecutionMember
    --     Concurrent_Access_Attempted
    --     RTI_Internal_Error

-- 8.4
    function Get_Attribute_Name
        (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
         The_Handle: in RTI.Attribute_Handle;
         Which_Class: in RTI.Object_Class_Handle)
        return RTI.Attribute_Name;
    -- should raise only the following exceptions:
    --     Object_Class_Not_Defined
    --     Attribute_Not_Defined
    --     Federate_Not_Execution_Member
    --     Concurrent_Access_Attempted
    --     RTI_Internal_Error;

-- 8.5
    function Get_Interaction_Class_Handle

```

```

(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
The_Name: in RTI.Interaction_Class_Name)
return RTI.Interaction_Class_Handle;
-- should raise only the following exceptions:
--   Name_Not_Found
--   Federate_Not_Execution_Member
--   Concurrent_Access_Attempted
--   RTI_Internal_Error

-- 8.6
function Get_Interaction_Class_Name
(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
The_Handle: in RTI.Interaction_Class_Handle)
return RTI.Interaction_Class_Name;
-- should raise only the following exceptions:
--   Interaction_Class_Not_Defined
--   Federate_Not_Execution_Member
--   Concurrent_Access_Attempted
--   RTI_Internal_Error

-- 8.7
function Get_Parameter_Handle
(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
The_Name: in RTI.Parameter_Name;
Which_Class: in RTI.Interaction_Class_Handle)
return RTI.Parameter_Handle;
-- should raise only the following exceptions:
--   Interaction_Class_Not_Defined
--   Name_Not_Found
--   Federate_Not_Execution_Member
--   Concurrent_Access_Attempted
--   RTI_Internal_Error

-- 8.8
function Get_Parameter_Name
(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
The_Handle: in RTI.Parameter_Handle;
Which_Class: in RTI.Interaction_Class_Handle)
return RTI.Parameter_Name;
-- should raise only the following exceptions:
--   Interaction_Class_Not_Defined
--   Interaction_Parameter_Not_Defined
--   Federate_Not_Execution_Member
--   Concurrent_Access_Attempted
--   RTI_Internal_Error

-- 8.13
procedure Turn_Regulation_On
(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr);
-- should raise only the following exceptions:
--   Federation_Time_Already_Passed
--   Federate_Not_Execution_Member
--   RTI_Internal_Error

function Turn_Regulation_On_Now
(The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr)
return RTI.Federation_Time;
-- should raise only the following exceptions:
--   Federate_Not_Execution_Member

```

```

--      RTI_Internal_Error

procedure Turn_Regulation_Off
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr);
-- should raise only the following exceptions:
--      Federate_Not_Execution_Member
--      RTI_Internal_Error

-- 8.14
procedure Set_Time_Constrained
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
   The_State: RTI.RTI_Boolean);
-- should raise only the following exceptions:
--      Federate_Not_Execution_Member
--      RTI_Internal_Error;

-- 8.15
function Tick
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr)
  return RTI.RTI_Boolean;
-- should raise only the following exceptions:
--      RTI_Internal_Error;

function Tick
  (The_RTI_Ambassador: in RTI_Ambassador_Class.RTI_Ambassador_Ptr;
   Minimum : in RTI.Tick_Time;
   Maximum : in RTI.Tick_Time)
  return RTI.RTI_Boolean;
-- should raise only the following exceptions:
--      RTI_Internal_Error;

end RTI_Support;

```